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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,405	09/29/2000	WALTER W. BUTLER	K35A0458	1929

26332 7590 03/12/2003

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EXAMINER

CASTRO, ANGEL A

ART UNIT PAPER NUMBER

2653

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

MM

Office Action Summary

Application No.

09/676,405

Applicant(s)

BUTLER, WALTER W.

Examiner

Angel A. Castro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/21/2003 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al (U.S. Pat. 5,631,787).

Regarding claim 1, Huang discloses a disk drive with improved shrouding (figures 1-2) comprising:

- (a) a disk 106;
- (b) a spindle motor 200 for rotating the disk;
- (c) an actuator arm 112;
- (d) a head 114 coupled to a distal end of the actuator arm;

(e) a rotary actuator 110 for rotating the actuator arm about a pivot to actuate the head radially over the disk;

(f) a base 104; and

(g) a cover 204 attached to the base to form a head disk assembly chamber, wherein the disk, head, actuator arm, and rotary actuator are enclosed within the head disk assembly chamber, the cover comprising an inner surface and an outer surface. Huang further discloses a shroud 120, 122, extending axially from the inner surface of the base into the head disk assembly chamber substantially enveloping the outer periphery of the disk, including at least part of the outer periphery coextensive with the actuator arm when the actuator arm is positioned adjacent to the outer periphery of the disk, to provide radial shrouding of the disk. Huang also discloses that the shroud could be a separated piece adhered to the inner surface of the base. Huang also discloses that the shroud can be made an integral part of the base (column 6, lines 50-67, column 7, lines 1-12). Huang does not specifically disclose that the shroud is part of the cover. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the disk drive of Huang with the shroud located on the cover, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. The rationale is as follows:

One of ordinary skill in the art would have been motivated to provide the disk drive of Huang with the shroud located on the cover, as doing this would reduce the manufacturing time.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Krum et al (U.S. Pat. 6,351,344).

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Regarding claim 4, Huang discloses the disk drive described above. Huang does not specifically disclose a C-shaped depression positioned substantially concentric over the disk. Krum et al teaches a disk drive with a cover having a C-shaped depression 126 (figures 4-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the disk drive of Huang with the cover having a C-shaped depression as taught by Krum. The rationale is as follows:

One of ordinary skill in the art would have been motivated to provide the disk drive of Huang with the cover having a C-shaped depression as taught by Krum, as doing this would allow for a high amount of rigidity of the cover.

Response to Arguments

5. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Allen (U.S. Pat. 5,790,344) discloses a base casting/cover; Bracken et al (U.S. Pat. 4,583,213) discloses an air shroud for data storage disks; Helms et al (U.S. Pat. 3,700,855) discloses a magnetic disc assembly.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel A. Castro whose telephone number is 703-308-8435.

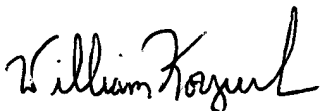
The examiner can normally be reached on Monday through Thursday, 8 AM to 6 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on 703-305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-308-8435 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Angel Castro, Ph.D.
March 7, 2003


WILLIAM KORZUCH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600